

CLAIMS

*Sub A*  
What is claimed is:

1. A method for interconnecting a first device and a second device in a network, comprising the step of:  
3 connecting the first device and the second device to a plurality of interfaces; and  
4 emulating a single high-speed interface with the plurality of interfaces.

1 2. The method of Claim 1, further comprising the step of selecting one of  
2 the plurality of interfaces to send a packet of data.

1 3. The method of Claim 2, wherein the step of selecting one of the plurality  
2 of interfaces to send the packet of data comprises utilizing state information in the first  
3 device.

1 4. The method of Claim 2, wherein the step of selecting one of the plurality  
2 of interfaces to send the packet of data comprises utilizing address information in the  
3 packet of data.

1 5. The method of Claim 1, further comprising the step of transmitting a first  
2 packet of data on only one of the plurality of interfaces.

1 6. A method for creating a multi-interface connection that connects a first  
2 device and a second device, comprising the steps of:  
3 assigning a first identifier to a first interface and a second interface at the first  
4 device; and

5 identifying a path between the first device to the second device with the first  
6 identifier.

1 7. The method of Claim 6, wherein the step of assigning the first identifier  
2 to the first interface and the second interface comprises assigning a media access control  
3 (MAC) address.

1 8. The method of Claim 6, wherein the step of assigning the first identifier  
2 to the first interface and the second interface comprises assigning an Internet Protocol  
3 (IP) address.

1 9. The method of Claim 6, wherein the step of assigning the first identifier  
2 to the first interface and the second interface comprises assigning a grouping identifier.

1 10. The method of Claim 6, further comprising the step of allocating data to  
2 be transmitted on the first interface and the second interface such that data traffic on the  
3 first interface and the second interface is approximately the same.

1 11. The method of Claim 10, wherein the step of allocating data to be  
2 transmitted on the first interface and the second interface, comprises:  
3 checking an output queue of the first interface and an output queue of the second  
4 interface;  
5 transmitting the data on the first interface when the output queue of the second  
6 interface is fuller than the output queue of the first interface and when previous data sent  
7 on the first interface is no longer on the first interface; and

8                   transmitting the data on the second interface when the output queue of the first  
9                   interface is fuller than the output queue of the second interface and when previous data  
10                  sent on the second interface is no longer on the second interface.

1                  12.       The method of Claim 6, further comprising the step of selecting one of  
2                  the first interface and the second interface to send a packet of data based on address  
3                  information in the packet of data.

1                  13.       The method of Claim 6, further comprising transmitting a first packet of  
2                  data on only one of the first interface and the second interface.

1                  14.       A method for creating a multi-interface connection, comprising:  
2                  connecting a first device to a plurality of interfaces;  
3                  emulating a single high-speed interface with the plurality of interfaces.

1                  15.       The method of Claim 14, further comprising the step of selecting one of  
2                  the plurality of interfaces to send a packet of data.

1                  16.       The method of Claim 15, wherein the step of selecting one of the  
2                  plurality of interfaces to send the packet of data comprises utilizing state information in  
3                  the first device.

1                  17.       The method of Claim 15, wherein the step of selecting one of the  
2                  plurality of interfaces to send the packet of data comprises utilizing address information  
3                  in the packet of data.

1        18. The method of Claim 14, further comprising the step of transmitting a  
2 first packet of data on only one of the plurality of interfaces.

*Sub A2* 1  
2        19. A network, comprising:  
3            a first device;  
4            a second device;  
5            a first interface coupled to the first device and the second device;  
6            a second interface coupled to the first device and the second device, wherein the  
first interface and the second interface emulate a single high speed interface.

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2        20. The network of Claim 19, wherein the first interface and the second  
interface are homogeneous.

1        21. The network of Claim 19, wherein the first device comprises a load  
2 balancing unit that allocates data to be transmitted on the first interface and the second  
3 interface such that data traffic on the first interface and the second interface is  
4 approximately the same.

1        22. The network of Claim 19, wherein the first device is an end-node.

1        23. The network of Claim 19, wherein the second device is a switch.

*Sub A3* 1  
2        24. A network, comprising:  
3            a first device;  
4            a second device;  
a first interface coupled to the first device and the second device;

5           a second interface coupled to the first device and the second device, wherein the  
6           first interface and the second interface are assigned an identifier that identifies a path  
7           between the first device and the second device.

1           25.    The network of Claim 24, wherein the identifier is an Internet Protocol  
2           (IP) address.

1           26.    The network of Claim 24, wherein the identifier is a media access control  
2           (MAC) address.

1           27.    The network of Claim 24, wherein the identifier is a grouping identifier.

1           28.    The network of Claim 24, wherein the first interface and the second  
2           interface are homogeneous.

1           29.    The network of Claim 24, wherein the first device comprises a load  
2           balancing unit that allocates data to be transmitted on the first interface and the second  
3           interface such that data traffic on the first interface and the second interface is  
4           approximately the same.

1           30.    The network of Claim 24, wherein the first device is an end-node.

1           31.    The network of Claim 24, wherein the second device is a switch.

32.    A network device, comprising:  
          a first port that connects to a first interface;

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3 a second port that connects to a second interface;  
4 a trunking pseudo driver, coupled to the first port and the second port, that  
5 allows the first interface and second interface to emulate a single high-speed device.

1 33. The network device of Claim 32, wherein the trunking pseudo driver  
2 comprises a load balancing unit that selects one of the first and second interfaces to  
3 transmit a packet of data.

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1 34. The network device of Claim 32, wherein the trunking pseudo driver  
2 comprises an identification unit that assigns a first identifier to the first interface and the  
3 second interface that identifies a path between the first and the second device.

1 35. The network device of Claim 32, wherein the first and second interface  
2 are homogeneous.

1 36. The network device of Claim 32, wherein the network device is an end-  
2 node.

1 37. The network device of Claim 32, wherein the network device is a switch.

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